

CHAPTER 8

• INTELLIGENCE AND MENTAL ABILITIES

INTELLIGENCE

- Intelligence = a general intellectual ability
- How intelligent are you?
 - Intelligence Test = instrument used to measure general mental abilities
- General notion of intelligence USUALLY correlates to “good” school performance

THEORIES OF INTELLIGENCE

- Spearman - intelligence is general
 - bright in one area means being bright in other areas
- Thurstone - intelligence is specific
 - abilities are independent of one another
- Cattell - two types of mental abilities
 - crystallized intelligence-specific skills
 - fluid intelligence-spatial & visual imagery

CONTEMPORARY THEORIES

- Sternberg Triarchic Theory
 - three types of intellectual abilities
 - Componential intelligence--acquire new knowledge, learn how to do things
 - Experiential intelligence--adjust to new concepts, task, in general respond to new situations
 - Contextual intelligence--capitalize on one's strengths and compensate for their weakness

- Gardner--Theory of Multiple Intelligences
 - like Thurstone-distinctive abilities
 - How many? Seven? More than seven?
 - Interpersonal Intelligence
 - Logical-mathematical intelligence
 - Linguistic intelligence
 - Spatial intelligence
 - Musical intelligence
 - Bodily-kinesthetic intelligence
 - Interpersonal intelligence
 - Intrapersonal intelligence

- Goleman--Theory of Emotional Intelligence
 - Very new idea of intelligence
 - how well people perceive their and other's emotions and how they manage their emotions
- Five Traits of emotional intelligence
 - Knowing one's own emotions
 - Managing one's emotions
 - Using emotions to motivate self
 - Recognizing the emotions of other people
 - Managing relationships

INTELLIGENCE TEST

- Alfred Binet & Theodore Simon--1905
 - Binet-Simon Scale
 - 30 test arranged in order of increasing difficulty
 - Intelligence Quotient (IQ)-- $IQ = MA/CA \times 100$
- Many revisions
 - individualized test
 - used most effectively on children
 - 15 different sub-test; each arranged in ascending order of difficulty

- David Wechsler-Wechsler Adult Intelligence Scale (WAIS-III)
 - Individual Test
 - First developed in 1939-Wechsler-Bellevue
- WAIS-III
 - Divided into two parts
 - Verbal skills & performance skills
 - provides an overall score and scores for verbal & performance sub-scales
 - Each sub-scale provides level of performance
- Wechsler Intelligence Scale for Children (WISC-III)
 - organized in same fashion as WAIS

Individual vs. Group Test

- Individual Test:
 - one on one test setting
 - takes trained examiner
- Group Test:
 - one examiner - many participants
 - no “trained” examiner
 - reduce bias on part of examiner

CULTURE-FAIR TEST

- Performance Test -- minimize or eliminate use of words
- Culture-Fair Test -- eliminate the effect of culture on test taking
 - Cattell’s Culture-fair Intelligence Test

GOOD TEST

- Reliability
 - consistency, can the instrument produce similar results over time/administrations
- Validity
 - does the instrument measure what it is intended to measure
- These two concepts measured by correlation coefficients

Criticisms of IQ Test

- Content - what is included in IQ test
- Good test takers
- Test administration
- Unfair to minorities
- Language and language usage
- Time issue
- Limited mental abilities tested

IQ & SUCCESS

- IQ test scores related to success in school
- Higher IQ - higher status occupations
- IQ & High Grades in College - little relationship to occupational success--now being challenged
- Is IQ the same as intelligence?

Determinates of Intelligence

- Heredity
 - Tyron-behavioral genetics
 - maze bright and maze dull rats
 - Twin Studies
- Environment
 - How environment, culture, family, education influence IQ performance

HUMAN DIVERSITY

- Gender
 - restricted to specific cognitive skills--appear to be decreasing
 - differences in socialization & expectations
- Culture
 - differences in cultural expectations
 - differences in educational processes: teachers, instructional systems & student expectations

EXTREMES OF INTELLIGENCE

- Mental Retardation
 - scores below 70 on IQ test
 - mild (50s to 70)
 - moderate (mid 30s to low 50s)
 - severe (low 20s to mid 30s)
 - profound (below 20 or 25)
- Giftedness
 - top 2% of population